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CANCER OF THE TONSIL: REMOVAL OF THE TUMOR BY EXTERNAL INCISION. (A SECOND CASE.)

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In 1869 the writer removed a malignant tumor of the tonsil by cutting down on it from outside the neck and opening the pharynx. So far as he could then learn, the operation was original. Subsequently, several treatises on surgery, as Bryant's, Gross's, etc., sustained his belief that the operation had not been performed before. He now finds in the *Jahresbericht der Gesammten Medicin* for 1869 that Dr. Hueter says he saw Von Langenbeck operate externally, and by sawing the jaw, in 1865; and that he himself performed a similar operation, the same year. Both were cases of sarcoma; Langenbeck's recovered, Hueter's died. Neither of the cases had been published; so that, having never heard of the operation, the writer supposed himself the first to do it.

After an interval of nine years, a second case has presented itself, of apparently identical nature, and has been operated on by him in a similar manner. Novelty in the operation, together with the rarity of the disease, would seem to merit publication.

Primary cancer of the tonsil is so rare that Lebert out of 9118 cases of cancer gives only three of the tonsils; Sibley out of 520 cases of cancer only six; Baker out of 500 cases of cancer only two.

Baker states the average duration of life, when the disease is not operated on, as being twelve and a half months.

The modes of operating previously employed had been by burning inside the mouth; by the wire écraseur inside (Bryant); by cutting and the cautery inside (J. C. Warren); by cutting for the large vessels outside and holding them back with a retractor, and then using the écraseur inside (Demarquay); by passing a controlling ligature around the carotid and then using a wire loop inside (Velpeau); by strangling by slow tension with a wire inside (Warren). For a complete and exhaustive account of the disease and the operations consult Mr. Alfred Poland's article in the *British and Foreign Medico-Chirurgical Review*, April, 1872. We now pass to our case.

Case II. The patient was a strong farmer, over six feet tall, and thirty-seven years of age. Four months ago, for the first time, he began to be troubled with his throat on the right side, finding an obstruction there, which slowly increased. Within the last six weeks, however, he thinks the growth has been more rapid, and has caused him to talk thickly. Now, December 20, 1877, on the inside of the mouth the right tonsil seems to be much enlarged, bulging into the fauces; and on the outside, at the angle of the jaw, is a movable little body, not deep, and about the size of a large button.

Although it was probable that the enlargement of the tonsil was organic and malignant, and although there was neither the history nor any appearance of syphilis or scrofula, yet it was deemed best to treat the patient with specific remedies for ten days or a fortnight, and see if the tonsil diminished. He was ordered five grains of iodide of potassium four times a day.

December 29th. As the enlargement of the tonsil was increasing fast it was decided to operate. Omit former prescription. To have citrate of iron and quinine, six grains, four times daily.

January 4, 1878. At this date, fifteen days after entering the hospital, the bubo or lymphatic gland below the angle of the jaw had tripled in size and had lost its mobility. In the fauces the diseased tonsil passed beyond the vertical line of the uvula toward the left side of the throat, leaving a narrow fissure through which the patient swallowed and breathed. It had not infiltrated the palatine pillars. It was seamed with a hard ridge at the posterior border, but was not ulcerated.

Operation. The patient having been etherized, an incision was first made on the right side of the neck, beginning about two inches below the angle of the jaw and extending up to the lower border of the same. A diseased gland was taken out, about one and a half inches in the long diameter, by one inch in the short. Hæmorrhage was checked by ice and ligatures.

The incision was then continued at an obtuse angle forward over the lower jaw and some two inches on to the cheek beyond. The opening was enlarged by a cross-cut, two inches long, directly over the lower jaw, and at about right angles to the primary incision. The digastric triangle was now uncovered by dissection, and the styloid group of muscles drawn downward by a retractor. The tissues over the jaw were scraped away down to the bone, which was then partially divided with a saw, just in front of the masseter muscle, the division being completed with the bone forceps. Tracheotomy was next performed; and the pharynx separated from the trachea by a sponge over the glottis. The two pieces of the lower jaw were now everted, and held, the one upwards and inwards, the other upwards and outwards.

Next the mylo-hyoid muscle was cut away, and, the finger being

passed into the throat, the tumor of the tonsil was pushed out towards the external wound, so that it was seen bulging and covered by the superior constrictor muscle of the pharynx only. A crucial incision, about one inch long each way, was made through the superior constrictor. The tumor now came in sight plainly. With the director, and with one finger outside and one inside the throat, the diseased mass was separated and removed without serious hæmorrhage. The palato-glossus muscle was divided where it adhered to the front of the growth. The palato-pharyngeus was untouched. No artery larger than the facial was divided. The subsequent perfect use of the parts proved that the hypoglossal, gustatory, and glosso-pharyngeal nerves were intact.

After removing the tonsil a large hole opened directly into the throat, beneath and below the jaw, and between the pillars of the fauces.

The sawn edges of the jaw were drilled and brought together with one wire, and silk sutures were taken in the upper part of the vertical cut of the skin, and in the cross-cut, the original incision being left open. A wet compress and bandage were applied. At no time was hæmorrhage excessive. Fourteen ligatures were used. The ends of these, with the ends of the wire, were left protruding through the wound.

Brandy one ounce, and beef essence four ounces, by the rectum, were ordered every four hours during the night; forty minims of liq. opii comp. being added at 7.30 P. M.

January 5th. Twenty-four hours after the operation the trachea tube was removed. Patient doing remarkably well. Has retained all injections but the first. No shock. Pulse good. Some slight oozing from the external wound. Patient drinks milk by single swallows, none of it passing through the wound, though the edges are separated by the passage of air. Injections to be omitted, and milk, beef tea, etc., to be given *ad libitum*.

January 6th. To have six ounces of sherry. Doing as well as possible. Pulse 100; temperature 101.3° F.

January 7th. Sutures removed this morning. Very little air passes through the wound below the jaw when the patient swallows. A. M., pulse 80; temperature 98.6°. P. M., pulse 120; temperature 99.8°.

January 10th. Patient up and dressed to-day, it being six days since the operation. Steady convalescence. Voice nearly as good as before the operation.

January 12th. Six ligatures came away this morning. Patient eating mush and milk in the ward dining-room.

January 14th. No pulmonary complication has followed removal of the tube. Tracheal incision entirely healed.

January 17th. No change except rapid improvement. All but three of the ligatures have now come away. Patient can open the mouth much more than he could a week ago.

January 22d. But one ligature now remains.

January 26th. The last ligature came away to-day. Patient says that for the last four days he has felt the lower jaw firmer.

January 27th. Three weeks and two days since operation. Ether being given, a crucial incision one and a half inches long in each direction was made over the jaw in the line of the original separation of the fragments. The jaw was found to be united by firm vascular tissue. The wire was cut in two places and withdrawn without difficulty. The wound was closed by sutures.

January 30th. Some redness and puffiness about the wound. Sutures removed. Poultice applied to side of face.

February 1st. Inflammation disappearing under poultice.

February 3d. Some little discharge from wound, which is granulating up. Examination of throat shows complete healing as far as can be seen.

February 4th. Now one month since operation. Complains of swelling and stiffness under jaw. On examination a small, hard, localized swelling is detected.

February 5th. The swelling noticed yesterday is found to be freely movable, and apparently situated just under the anterior margin of the sterno-cleido-mastoid muscle, close to the end of the incision made at the first operation. It being considered a lymphatic gland, probably infiltrated with disease, its removal was advised.

February 6th. The patient desiring immediate operation, Dr. Cheever came in the afternoon to perform it.

With the patient in the horizontal position, an incision two inches long was made close to and parallel with the anterior margin of the sterno-cleido-mastoid muscle. This opening was enlarged by a slight cut midway in the primary incision, at right angles to it, and toward the median line of the neck. The sterno-mastoid being held out of the way by a retractor, the gland was reached by careful dissection. It was dissected out by cautious cutting with the scalpel, hæmorrhage from the first being very free.

The tumor was adherent to the surrounding parts, and lying on the carotid sheath. Numerous vessels were cut short near their origin from the carotid. Six ligatures were applied, and six sutures used to bring together the edges of the wound, an opening being left below for the passage of the knot of ligatures. Cold-water compress and bandage.

On section, the gross appearance of the gland was that of a ring of malignant disease surrounding a mass of cheesy degeneration.

February 7th. Patient suffered much from his ether, being depressed and uneasy. Hypodermic injection of one sixth of a grain of sulphate of morphia without much effect. Pain in neck not excessive.

February 8th. Sitting up. Some redness and soreness about wound. Poultice.

February 9th. Less angry appearance about wound. Patient more comfortable. All sutures removed. Union by first intention, except around ligatures.

February 12th. Five ligatures removed. Patient up and walking about, feeling quite well.

February 17th. Jaw matches well, with no sign of division. Throat entirely healed. Slight granulating surface of second operation (for removal of wire) touched with caustic. Last ligature brought away. Omit poultice, and dress with simple cerate on sheet lint.

February 20th. Now two months since the first operation. Patient has continued to improve. Slight exuberance of granulations where the last ligature came away touched with caustic. External orifice of mouth somewhat awry. Slight numbness over right side of chin still remains. In the site of the removed tonsil is a hard mass, the size of a bean, possibly cicatricial only, but enough to arouse suspicion. To take iodide of potassium, five grains three times a day for a month, and to be discharged.

After three weeks' absence the patient returned. The suspicious hard scar in the fauces had grown into a lump as large as a small hickory nut. The outer surface of the neck was well.

Without ether, the throat was deeply and repeatedly cauterized with the galvano-cautery and platinum wire. A loop was put around the growth and it was cut off. Its base was deeply burned and shriveled up with the white-hot platinum point. The patient convalesced readily. Two weeks later the growth had begun to start again. The patient was seated beside the kitchen range, and six irons were heated in the coals. Eighteen applications were made to the region of the tonsil and soft palate, with white-hot irons. No ether was given. The patient bore the treatment with great firmness. The whole region was deeply burned, shrunken, and charred. In one week's time he recovered, swallowed well, and was again discharged April 1st.

The last week in May, less than two months after the last cauterization, the patient again returned. The right half of the throat was occupied by a hard, lobulated tumor which grew from between the soft palate and pharynx, and two thirds occluded the pharynx. It was much larger than before the first operation of January 4th, five months previous. Outside, the neck was occupied by a tumor as large as a cocoa-nut, filling the neck from the jaw nearly to the collar-bone, and pushing over the larynx an inch beyond the median line. This swelling was red, angry, and œdematous, but not fluctuating. The patient could still swallow and breathe without difficulty, and had but little pain. His general health was vigorous. He was advised to forego any farther

operative measures, and to try to keep himself comfortable as long as he could live. If dyspnœa supervened, to have a tube put in the trachea, and if dysphagia came on, to have the external mass incised to relieve pressure.

To recapitulate, it will thus be seen that the primary growth began in the tonsil in August. Lymphatic poisoning and a bubo formed in November. The tumor and the bubo were removed by the knife early in January. Early in February a second bubo had formed, and was removed. In March the original growth was sprouting again, and was twice burned away, the bubo not recurring. In May the pharyngeal tumor was larger than ever, and the bubo was recurrent in an enormous growth.

The very malignant history of this case and the rarity of cancer of the tonsil render the microscopic examination of the primary growth of much interest.

Numerous hardened sections were made and compared with others from normal tonsils. Accurate drawings with the camera lucida of both were prepared, but circumstances have prevented their reproduction with this article. To describe with fidelity the various appearances is difficult, but we will endeavor to do so.

The cells of normal tonsil are packed in irregular lobules, but are of uniform size and rounded form. The cells of the tumor are also packed in capsules of connective tissue, but they are not of uniform size, and they are epitheloid in form. They also show some tendency to be arranged in nests. Normal tonsil has trabeculæ of fibrous and connective tissue intersecting it. In the tumor these are all displaced and obliterated by epitheloid cells. Normal tonsil is largely permeated by striped muscular tissue, in groups of bundles and aggregated together. The tumor shows the same striated fibrillæ everywhere pushed apart by rapid and dense cell-growth. In normal tonsil it is possible to make out the lobules and follicles of the gland. In the tumor it is not. In short, in the new growth the elements of the true tonsil have been separated, obscured, and overlaid, so to speak, by a dense and enormous reproduction of cells resembling epithelial cells, with but little connective tissue.

In the tumor of the tonsil removed and described by me in 1869, the growth was largely cellular, and with but little connective tissue. The cells were uniform and ovoid. But they contained two, three, and even four nucleoli. In that case there was a subsequent infiltration of the soft palate. The patient was lost sight of, but the tumor was malignant and recurrent in all probability. It also had poisoned the lymphatics, and bubo was present in the neck. It is recorded that this lymphatic gland, thus secondarily affected, had the same cell elements and arrangement as the tumor of the tonsil.

The operation in 1869 differed in some details from the one described above, and a brief abstract of it may be permitted.[1]

In the first case the digastric, stylo-hyoid, and stylo-glossus muscles were divided to get room. In the second case this was gained by sawing the lower jaw and turning it up, and thus none of these muscles were cut, but they were all drawn downwards. The second manœuvre we think the best. In the first case both pillars of the soft palate were left intact; in the second the anterior pillar (palato-glossus) was adherent to the growth, and was divided. The largest vessel cut in each case was the facial artery. Twelve ligatures were required in the first case, fourteen in the second. In each case paralysis of the lower lip ensued, due to the division of filaments of the facial nerve. In the first case the tumor was smaller, the opening into the pharynx was smaller, and no fluid escaped from the wound, in swallowing liquids, after eight days. In the second case *no fluid* escaped from the wound at all in *deglutition*, but only air was churned out. The first case was fed with a stomach tube. The second swallowed voluntarily and easily.

The fear of a permanent fistula is proved to be fallacious by the results in œsophagotomy, and it is even less likely to follow pharyngotomy.

Removal of tumors of the tonsil by *external* incision is not free from danger from the depth of the wound, the proximity of the internal carotid, and the crossing through the wound of the hypoglossal, gustatory, and glosso-pharyngeal nerves.

Says Mr. Bryant: "The removal of these tumors from *within* seems almost out of all question, whether by caustics, the écraseur, or enucleation. I attempted the latter plan in one case, with only partial success."

The question remains whether, in view of such rapid and persistent recurrence as in the second case, it is worth while to interfere with cancer of the tonsil at all, by operation. The same doubt might apply to other cancers, especially those growing in warm and moist situations, which increase faster and are more speedily fatal than those on the cutaneous surface. Cancer in the sphenoid cells and the antrum is an example.

THE RELATION WHICH CHEMISTRY BEARS TO FORENSIC MEDICINE.[2]

BY PROF. E. S. WOOD, M. D.

It will naturally be impossible, in the short space of twenty minutes allotted to this essay, to treat with any degree of thoroughness so extensive a subject. I shall therefore limit my remarks to a few practical

[1] Vide Medical and Surgical Reports of the Boston City Hospital, First Series, 1870, page 390 et seq.

[2] Read before the Massachusetts Medico-Legal Society.

points having reference to the relations between the medical chemist and the medical jurist or medical examiner, the importance of which my experience with toxicological cases in New England has shown me is either not generally appreciated or is not always borne in mind.

The duty of the chemist in legal cases is, in the first place, to assist justice, and, in the second, if possible, to further the advancement of science; and in order to fulfill this duty his work must be most thoroughly done, which necessarily presupposes a proper and complete treatment of the case before it reaches his hands. The object of a chemical analysis, in toxicological cases at least, — and it is to these cases that I shall chiefly refer, — is to determine the cause of death, or to confirm the opinion already formed. If poison has been the cause of death, this should be determined by the shortest method consistent with accuracy; and to accomplish this the chemist should be possessed of all of the information which it is possible for the physician to give him. He should be not merely a chemist, but he should be a toxicologist, in the widest sense of the term. He should understand not only the physical and chemical properties of the poisons which he endeavors to detect, but also their action upon the human and animal economy, the symptoms which they produce, and the changes which they may cause in the various organs and tissues. With such knowledge he may, provided with the information which can be furnished only by the physician who had charge of the case before death, or the pathologist who conducted the examination of the body after death, often be enabled to eliminate certain classes of poisons, or to confine his attention to a single class only or even to a single poison. If he is thus informed the analysis may be completed much more quickly than otherwise, and the county saved considerable expense.

It only too frequently happens that a complete account of the post-mortem appearances cannot be obtained, because the section has not been thoroughly performed. In a personal experience with four cases of poisoning by strychnia, three of which were cases of criminal poisoning, I have never known of the spinal cord being examined, a point which might prove of vital importance in a criminal trial; and in one of these cases, one which may still result in criminal proceedings, the intestines even were not examined, except perhaps their external surface. In two other cases in which the cause of death was an irritant poison, the intestines were delivered to me unopened, an omission which might result in the escape of a person guilty of murder.

Another important point in reference to enabling the chemist to perform his work properly is the collection of the suitable material for analysis both during life and after death. Most important of all is the saving of the vomitus and excreta in cases of suspected poisoning. There are numerous instances in which this precaution was almost the

sole means of proving the cause of death. We all know that the irritant poisons are violent emetics, and frequently result in the complete emptying of the stomach, so that after death no poison can be found in that viscus. The most notable instance of this kind which I recall is that of Couty de la Pomerais, which was investigated by M. Tardieu in 1863, and in which a large amount of digitalin was obtained from scrapings from the floor on which the vomitus had fallen, while only traces could be detected in the stomach and intestines. Anything which has been stained by vomitus or excreta, such as clothing or bedding, may be of the greatest importance in a medico-legal case, and should never be thrown away or be washed, as is too frequently the case. In a case of digitalis poisoning of my own it appeared in evidence that the bedding and clothing were very much soiled by vomitus and intestinal discharges, yet it was not saved for examination. This was not, however, of great conseqence, since quite a large quantity of powdered digitalis was found in the stomach after death, a sufficient amount to enable me to detect it by the chemical, botanical, and physiological tests. It may happen, too, that the administration of emetics or the use of the stomach-pump may entirely remove the poison from the stomach, in which case the vomitus and excreta evacuated before death, and fluids withdrawn by the stomach-pump, would be the most important substances for analysis.

In some cases life may be prolonged for a sufficiently long time to permit of the complete elimination of the poison, and death result only from its secondary effects. This is especially apt to be so with phosphorus and some of the alkaloids, and in one case of arsenical poisoning, with which I was familiar, and in which the patient did not die for about a fortnight, there was only a minute amount of arsenic left in the organs. Hence another reason for saving the vomitus, if there is any, in cases of *suspected* poisoning.

For the same reasons the urine which is passed during life should be collected for chemical examination when poisoning is suspected. The kidneys being the chief eliminatory organs, the urine is apt to contain the poison for a long time after its ingestion. This is most liable to be of significance in the case of those poisons which do not prove fatal in a short time, such as arsenic, antimony, and some of the vegetable poisons; especially important is it in cases of chronic antimony poisoning, one of which has recently been on trial in New York. The urine is of value in such cases not only for the detection of the poison, but also for the ordinary clinical examination, which may show evidences of fatty degeneration of the kidney in cases of phosphorus, arsenic, and antimony poisoning, or of acute nephritis, which may be due to the action of many irritant poisons in passing through the kidney, such as mercury, cantharides, etc. I once had an opportunity of

examining the urine in a case of poisoning caused by a medicinal dose of calomel; it presented all of the characteristics of acute nephritis.

The urine found in the bladder after death is also of great importance in many cases, since the detection of the poison in that fluid may settle the question, within certain limits, as to the time of its administration, — a question which is of such vital importance in many medico-legal cases. This is also of scientific interest in showing the time required for the complete elimination of a poison. For instance, it has been recently determined that arsenic *may* remain in the system for six and a half weeks, although fifteen to twenty days is usually considered sufficient for its complete separation from the body.

Suspicious substances, those which may have been the cause of the illness, found in the room or neighborhood of the patient or deceased should in legal or doubtful cases always be seized for testing; and this should always be done *at once*, when first seen by the physician, coroner, or medical examiner, and no time allowed to elapse so that they may be tampered with. The possession of such substances by the chemist will frequently show him, by a few simple tests, the nature of the poison probably present, and perhaps enable him to arrive at his results many days earlier than he otherwise could. Although this would seem to be the most natural thing for the medical officer to do, yet it is, so far as my experience goes, very rarely done. In a case which is still under investigation, I was not informed until after my analysis was nearly completed that the suspected person was possessed of oxalic acid and nux vomica; but, fortunately, the symptoms were known, so that the latter substance was sought for rather than any of the irritant poisons. In another case, however, crystals which proved to be those of oxalic acid were found in the pocket of a coat belonging to the deceased, and by searching directly for this substance, and using the entire amount of material at my command, I was enabled to detect it, a result which probably could not have been attained had a large portion of the material been used up in an analysis for the other irritant poisons.

Again, I regret to be obliged to make the statement that it is rare for me to receive for analysis, in cases of suspected death from poison, any organs except the stomach, until the fact is mentioned that if the case should happen to result in a criminal trial, the detection of the poison in the stomach alone might be of no avail, since that would not prove with absolute certainty that it had not been introduced into the body after death; whereas its presence in other organs at a distance from the stomach would show that it must have been absorbed into the circulation and carried there during life, and also that death may have resulted from the action of a poison which has disappeared from the stomach and intestines, but may be found in the other viscera. Of the solid

viscera the liver, as a rule, contains the largest amount of poison when the latter has been taken by the mouth, it being carried to that organ as soon as absorbed through the portal circulation; and in the case of many poisons, strychnia for example, it appears to enter into organic combination with the tissue or constituents of that viscus, and be retained, or heaped up in it, as it were. In some criminal cases, however, the objection may be raised, especially when a long time has elapsed since the death of the victim, that the poison may have reached the liver also after death by endosmosis through the wall of the stomach, and therefore the analysis of some of the other organs also is of value. For this reason the various organs should always be placed in different vessels, and never be allowed to lie in contact with each other.

It is of almost as much importance to save the brain for analysis as the liver. In the case of arsenic, for example, it has been recently shown that this poison is contained in the brain to a larger extent even than in the liver in cases of poisoning by it. It would surely be impossible to introduce arsenic or other poison into the cavity of the skull after death without the certainty of the detection of such an act.

Frequently, even when vomiting and purging have not occurred, all of the poison may have been removed from the stomach and intestines by absorption, and yet be capable of detection in the blood and solid viscera. Nicotina, for example, in the famous Count Bocarmé case, was detected in the liver and lungs; prussic acid has frequently been found in the blood, phosphorus in the liver; strychnia and nearly all of the mineral and vegetable poisons have been found in the blood, secretions, and solid viscera. The stomach, contents of the stomach, intestines, contents of the intestines, liver, brain, spleen and kidneys, and urine should be placed in separate jars for chemical analysis in all cases in which a chemical analysis is of importance. Except in criminal cases it will not be advisable, of course, to examine all of these organs separately, on account of the length of time required and the expense incurred; but in many cases, when not needed for legal purposes, this material may be used for settling some points of scientific interest.

It is also of value to remember that the identity of all of these articles, after they have been properly removed, sealed, and labeled, must be preserved beyond any question whatever. This can be done only by keeping them under lock and key until they are dispatched by special messenger, or better messengers, and delivered in person to the analyst, who must in his turn keep them constantly under lock and key. In a recent criminal trial, a notorious criminal would have escaped from justice had the chemical evidence rested solely upon the detection of the poison in the stomach, which had been sent by express. The other organs, which also proved to contain the poison, were afterwards sent by special messenger, according to the direction of the analyst.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.[1]

BY D. H. HAYDEN, M. D.

Bronchitis in Infants and the Histology of Plugs in the Bronchi.[2] — Dr. Schlemmer, docent and instructor in forensic medicine at the Vienna University, begins the consideration of the subject in question with the assertion that the manner of death in infants in a large proportion of cases is by suffocation (66.7 per cent.). This is explained by the fact that the new-born child at the moment of birth is exposed to the dangers of premature respiration, with imperfect entrance of air; and the suckling, owing to its external conditions and the thereby resulting demands of its organism, is equally liable to this accident.

The author discusses in order the subject of infants' nourishment, the matters pertaining to the dwelling and the care of infants, and the influences of temperature upon them. He then proceeds to the description of the post-mortem appearances found in those who have died of suffocation; and side by side with bronchitis — divided here into two classes — are contrasted the other cases of death by suffocation, as during vomiting, at the moment of birth, by the bed-clothes, as well as by violence (strangulation, casting into a privy).

The first class of cases of bronchitis comprises those where the disease is recognized but not rightfully appreciated. (Seventy-three cases in one year, a portion of the autopsy reports being given in full.) The second class of "bronchitic cases" embraces those where the disease had not been recognized, and where the child had died suddenly in convulsions, or without any peculiar symptoms that attracted notice. (Eighteen cases within one year.) In all these cases, wherever the author could demonstrate the signs of suffocation macroscopically, he always found plugs in the bronchi, and at the same time more or less redness of the mucous membrane. He was also able to show microscopically that the origin of these plugs was the mucous membrane of the bronchi. There need be simply a slight departure from the infant's usual health, entirely overlooked by those in charge, to exercise an influence favoring these accumulations, which are found on microscopical examination to consist of epithelium, more or less changed from the normal (turbidity, loss of the ciliæ, and an isolation of the separate epithelial cells). There was found to have coexisted in more than one third of the cases an intestinal catarrh, and the author is inclined to the opinion that this latter and bronchitis, from an ætiological point of view, have many things in common.

Cases of suffocation from other causes than bronchitis are then con-

[1] Concluded from page 120.

[2] Oesterreichisches Jahrbuch für Pädiatrik, viii. 1, s. 41, 1877; Schmidt's Jahrbücher, No. 1, March 11, 1878.

sidered, those occurring during the act of vomiting being first taken up. In these cases there are noticed, as contents of the bronchi, a fluid containing milk corpuscles with isolated ciliated epithelial cells, sparsely granulated, presenting the appearance of being covered with dust, and they generally occur just after the infant has had a full meal. Six cases are added of suffocation by the bed-clothes, nine at the time of birth, and five by violence after birth.

The results of his investigations are summed up as follows: The meconium or liquor amnii inspired during birth can, sometimes after the lapse of a long time, be the cause of death. The disturbances set up by diseases of the air-passages can easily be overlooked in infants by those in charge. At this age also partial impediments to respiration (slipping down of the infant under the bed-clothes) can be fatal. Death by suffocation is made easy in infants, owing to the rapid changes in the epithelium of their mucous membrane, a material being thereby furnished for closing up the bronchi with plugs, and for the stirring up of local disturbances. When the obstruction to the entrance of air is a purely mechanical one (bed-clothes, strangulation by violence), no foreign substance will be found in the bronchi; when caused by the inspiration of fluids (during vomiting, amniotic fluid, meconium) their presence will be detected. The gross appearances in bronchitis can often be confounded with those due to some other process (suffocation during vomiting), and can be differentiated the one from the other only by the microscope (especially by microscopical chemistry).

Lymphadenitis Retropharyngealis and its Relation to Idiopathic Retropharyngeal Abscesses in Children.[1] — Dr. E. Kormann,[2] following in this article the excellent work of Dr. Bokai, published in 1876,[3] gives the result of a large number of investigations made for the purpose of testing the accuracy of the theory, first demonstrated by Dr. Schmitz,[4] of the connection between lymphadenitis and retropharyngeal abscesses. For this purpose the author has subjected, since the appearance of Dr. Schmitz's article, to a digital examination of the pharynx all children that have been brought to him affected with chronic nasal catarrh, or with acute affections of similar nature, as well as all affected in any way with difficulty of swallowing. Of the 211 cases thus examined an inflammation of the retropharyngeal glands was found 193 times, and as follows: —

33 cases of soör	23 times.
57 cases of stomatitis catarrhalis and ulcerosa	12 times.
57 cases of (scrofulous) ozœna and chronic pharyngitis	55 times.
10 cases of inflammation of the ear-passages (mostly of middle ear)	10 times.
83 cases of pharyngeal catarrh in scarlet fever and measles	80 times.
13 cases of diphtheritis faucium	13 times.

[1] Schmidt's Jahrbücher, No. 2, April 8, 1878.

[2] Central-Zeitung für Kinderheilkunde, i. 5, page 67, 1877.

[3] Vide JOURNAL, February 1, 1877, page 133.

[4] Vide JOURNAL, February 5, 1874, page 140.

In these 193 cases it came only once to the formation of an abscess. In adults Dr. Kormann has up to the present time examined only those affected with syphilitic pharyngitis, and without one exception he has been able to detect swelling of the glands; likewise in two cases of mercurialismus. In a patient suffering with chronic pharyngitis and a suspicious cough, and living under unfavorable external conditions, he found a double-sided retropharyngeal abscess.

In accordance, therefore, with these numerous observations of Dr. Kormann, inflammation of the retropharyngeal glands is much more common with children than is generally supposed; and in nearly every case of ozœna, pharyngitis, pharyngeal diphtheria, or inflammations of the ear these glands are to be found swollen behind one or both tonsils. Inasmuch as, however, of all these cases one only came to the formation of an abscess, Dr. Kormann, in opposition to the view of Dr. Bokai, considers the termination in resolution as the rule. There was but one fatal case (scarlatina with diphtheritis faucium), and an autopsy of this could not be obtained. The two cases of retropharyngeal abscess are reported in full, and the following conclusions are given as a result of the investigations: —

(1.) Swollen and inflamed retropharyngeal glands (lymphadenitis retropharyngealis) are a frequent accompaniment of diseases of the nose, pharynx, and mouth, as well as of the ear, and are probably to be regarded as the rule, in the same way as a swelling of the subcutaneous glands in eczemas of the skin, and in scrofulous inflammation in general. Among exciting causes are prominently to be mentioned chronic inflammations as found in scrofulous children, and the acute affections of which inflammations of the mouth are one symptom, as diphtheria, measles, scarlatina, soör, syphilis. With regard to small-pox the author has had no experience.

(2.) Retropharyngeal abscesses are always secondary, — idiopathic abscesses to a lymphadenitis, traumatic abscesses being consecutive to injuries, and sinking abscesses following caries of the vertebræ. Lymphadenitis is also a secondary affection, following a scrofulous or infectious disease of the mucous membrane. Abscesses called by Bokai secondary abscesses are to be classed with the sinking abscesses.

(3.) Retropharyngeal abscesses are not limited to the first two years of life (Schmitz), or to childhood (Bokai), although this affection in adults is extremely rare.

Acute Fatty Degeneration in New-Born Children.[1] — Herr Herz, at a meeting of the College of Physicians of Vienna, held December 17, 1877, read a paper upon the above disease, and reported two cases that had come under his observation, both having occurred in the same family, and one within a year of the other. The first accurate account of

[1] Wiener medicinische Presse, No. 5, February 3, 1878.

this disease was published in 1861 by Buhl and Hecker, and Herr Herz alluded to the great similarity of his cases with those reported by Dr. W. S. Bigelow as having occurred in the Boston Lying-In Hospital in 1873.[1]

There was an autopsy in one only of the cases, it not being permitted in the other, and the post-mortem appearances found specially characteristic of the disease were: (1) cyanosis; (2) fatty degeneration of the liver and kidneys; (3) internal hæmorrhages; (4) diphtheritic membrane in the pharynx. Microscopical examination showed in Herz's case that came to an autopsy, as in the eight autopsies reported by Dr. Bigelow, the presence of bodies resembling Billroth's cocco-bacteria.

The most prominent symptoms in Herz's cases, as well as in those reported by Dr. Bigelow, were: (1.) Dark discoloration of the skin. In Herz's cases the whole skin assumed a peculiar dark yellowish-green color (bronze), occurring in one case upon the eleventh, in the other upon the third day. Herz considers this discoloration to be of a hæmatogenous character, due to the exudation of the coloring matter of the blood previously having been transformed into hæmatoidine. In both the cases there was a slight icterus that preceded the dark discoloration. (2.) Hæmaturia. (3.) Diarrhœa, with offensive green stools. (4.) Diphtheritic affection of some mucous membrane. In both of Herz's cases there appeared upon the hard palate the "aphthæ of Bednar" (in the first case on the fourth day, in the second immediately after birth), which became covered with a diphtheritic membrane. This increased in circumference and depth, and finally involved the soft palate.

On the eleventh day with the first child, and on the third with the second, simultaneous with the dark discoloration, symptoms of decided collapse made their appearance, and on the twelfth and fourth days respectively death took place under an increasing collapse and the supervention of mild convulsions. Asphyxia, described by Buhl as one of the most prominent symptoms, was entirely absent in the second case, and in the first existed only in a very slight degree. Moreover, in this case the cyanosis did not follow immediately upon the asphyxia, as Buhl asserts, but preceded only a short time the fatal termination, appearing about at the same time as the collapse and hæmaturia.

The bronze coloration on the one hand and the hæmaturia on the other were the only clinically noticeable hæmorrhages in Herz's cases, although the surface of the kidneys showed ecchymoses, and there was more or less infiltration of blood into the substance of the spleen. From the absence of other hæmorrhages, and from the fact that the microscope showed fatty degeneration only in the liver and kidneys, the other organs prone to take on this degenerative change remaining entirely

[1] Vide JOURNAL, March 11, 1875, page 277.

intact, Dr. Herz is led to the conclusion that this disease can appear with various grades of severity, and that his own cases were not of the severest form.

A careful examination of the parents failed to show any possibility of an hereditary taint as the cause of the disease. The confinement in each case was an easy one, and the absence of asphyxia in the second case does not support Hewitt's theory of an intra-uterine cause. Dr. Herz considers the diphtheritic affection of the mouth which complicated in a striking manner both his cases to stand in a causal relation to the other disturbances, and agrees with Dr. Bigelow that these changes were of a septic character.

THE MASSACHUSETTS MEDICO-LEGAL SOCIETY.

REPORT OF THE CORRESPONDING SECRETARY, JUNE 11, 1878.

BY MEDICAL EXAMINER FREDERIC WINSOR, M. D.

It must be understood that the report which I have the honor to make has for its material the work of the six months ending December 31, 1877, and also that this was done under a statute of the commonwealth and under society by-laws altogether new to the medical examiners, who did the work and reported to the corresponding secretary. As a matter of course there has been, in performing duties so unfamiliar, less method, andaccuracy, promptness than may fairly be expected in the work of succeeding years.

During the six months which this report covers, forty-one of the fifty medical examiners who have joined this society made 443 "views," in 116 of which autopsies were made. Ninety-nine inquests have been held, leading to 21 prosecutions, of which 5 resulted in conviction. In these 443 cases, death resulted from natural causes in 102; from railroad accidents in 77; from other accidents in 129; from suicide in 71; from violence in 51.

It is of course desirable to pursue the analysis farther, and learn what modes of suicide were used, what was the most frequent form of fatal accident, etc.; but it is not possible to do so with regard to all the cases, 186 having never been reported in detail to the corresponding secretary.

Some information of interest may be obtained, however, by analyzing the remaining cases, and it appears that of 32 cases of suicide 12 were by hanging; 1 was by strangling; 6 by poison; 3 by drowning; 3 by shooting; 3 by railroad train; 2 by cutting the throat; 1 by stabbing; 1 by leaping from a height. Arsenious acid was the poison used in 2 cases, opium and morphia in 2 other cases.

Of the persons committing suicide 5 were known to be insane.

Of 64 deaths from accidents not caused by railroad carriages there were from drowning 36; from falls 7; from heavy falling articles 6; from inhaling coal-gas 5; by being run over 4; from machinery 2; from burning and scalding 2; from burning at lime-kiln, after suffocation by its gas, 1; by shooting 1.

Of the deaths by accidental drowning, 4 were of persons previously known to be insane.

One naturally asks, What proportion of these deaths by suicide or accident were preventable? The answer is, Very few under the existing state of things. But by judicious legislation the proportion of such deaths might be materially diminished. It is preposterous that no restrictions should be put upon the sale of poisons in this commonwealth. As the law now stands, *any one* can obtain for a few cents, at the nearest apothecary's shop, a fatal dose, and he may take his choice of half a dozen poisons. There is no reason to suppose that the provision of the present law, which requires the vender to keep a register of the name and residence of the persons purchasing certain specified poisons, is complied with in one quarter of the cases.

In view of the great loss of life by drowning, it seems within the function of the State to furnish instruction in swimming, and in resuscitating persons nearly drowned. To the writer it appears that such instruction might with propriety be grafted upon our public-school system. It must, however, be said that a very large proportion of the persons drowned, and so coming under the "view" of the medical examiner, were intoxicated at the time of the accident.

Much may be done to diminish the frequency of poisoning by coal-gas if the public can be informed as to the nature of the danger and the means of prevention, and if a public sentiment can be roused against "dampers" which close smoke-pipes and obstruct the escape of poisonous gases into the open air.

It is not generally known that of fatal railroad accidents quite one half happen to persons walking on or near the track, often while intoxicated. Now, if railroad corporations and the towns through which the roads pass can devise means to prevent such walking, fifty lives would be annually saved to the commonwealth.

Finally, whatever tends to lessen drunkenness acts directly to diminish accidents of all kinds. If it were possible to put a stop to it, accidents would be diminished by one half.

Instead of criticising unsatisfactory reports of cases, and pointing out their defects, it seems wiser to submit to the society a few of the many reports which are excellent, in the hope that they may serve as standards for future work.

Case VII.[1] (1.) View in Wakefield, on east shore of Lake Quanaponitt.
(2.) May 22, 1878. Twelve, noon.
(3.) Summoned by H. Haskell, Jr.
(4.) Male. Age unknown, one to five days. Nationality unknown.
(5.) Name and residence unknown.
(6.) This body of a male infant was found floating in the water, a short distance from the eastern shore. Wind blowing freshly from the west. Body

[1] The numeral references in these illustrative cases correspond with the following "order of items" by which members of the society are guided in preparing their reports for the corresponding secretary: (1.) State locality of view. (2.) Date and hour. (3.) By whom summoned. (4.) Sex, age, and nationality of person found dead. (5.) Name and residence of deceased (if known). (6.) Position and condition of body. (7.) Circumstances determining decision of medical examiner. (8.) Autopsy and its results. (9.) Microscopical and chemical examination. (10.) Inquest and its results; whether or not followed by prosecution and conviction of any person implicated.

beating up and down against the rocks. On the shore near the body was a woven cotton and wool undershirt, sleeves cut off, partly filled with coarse sand. Flakes of epidermis were adherent to the inside of the shirt. The body of the infant had around its neck a piece of cord (clothes-line) 1.5 m. in length. This cord was twice around the neck, but very loosely, and was knotted. There was also thrice around the neck a piece of cotton twine, one m. in length. The large cord was caught in a small bush at a short distance from the shore, and parted in the attempt to land it.

Time of Death. — In my opinion death occurred between May 1 and May 15, 1878.

(7.) Decision of medical examiner and circumstances determining it: —

(*a.*) Maturity of child. Full term. (*b.*) Was it born alive? Position of diaphragm, appearance and condition of lungs (hydrostatic test), contents of large intestine, would all indicate that it had lived and breathed. (*c.*) If born alive, how long did it live? Between twenty-four hours and five days. Absence of meconium and color of fæcal matter in colon indicated an age of more than twenty-four hours. Condition of funis, less than five days. (*d.*) *What was the cause of its death?* I see no reason to doubt that it was thrown into the water alive, and perished from drowning, being doubtless tied up in the shirt already mentioned.

(8.) *Autopsy*, occupying forty-five minutes. *External examination.* — The body is (*a*) that of an apparently mature infant, fifty-two cm. in length, weight about five kilogr. A well-nourished infant. Arms and legs fat. (*b.*) Body pale and white generally. Abdomen and scalp bluish-green. (*c.*) Some thin, sanguineous fluid escaped from the mouth and ears. (*d.*) Hair thin and scanty. Eyes flabby and colorless (opaque). No teeth. Jaw-bone protruding through mucous membrane on left side (sup. max.). Roof of mouth deficient (from decomposition). (*e.*) A considerable portion of the flesh of the right shoulder (half-way down the arm) appeared to be torn or gnawed away; also two small spots about the back. (*f.*) Chest full. Abdomen much distended. (*g.*) Scrotum swollen. (*h.*) Epidermis wanting in exposed parts of the body. Adherent in the folds. (*i.*) Funis six cm. in length, firm, no ligature around it.

Internal Examination. — (*j.*) *Cranial cavity.* Scalp of moderate thickness, loose and flabby. Cranial bones appear loose within it. Bones well developed for a child at maturity. Sutures widely separated. Cerebral matter entirely gone.

Thorax. (*k.*) Incision from neck to pubes. Adipose tissue abundant. Muscles pale. Peritoneal cavity distended with gas. (*l.*) Diaphragm not highly arched. (*m.*) Position of abdominal organs normal. Sternum removed. (*n.*) Right lung distended, bright red in color. Left lung less distended, reddish-purple. Both lungs crepitant, and studded on the outside with vesicles. No fluid in pleura or pericardium. The vesicles on the surface of the lungs were carefully opened, and the lungs placed in a pail of fresh water. They floated high on its surface. (*o.*) The heart appeared normal, about the size of the child's fist. It contained no blood in either ventricle.

Abdomen. (*p.*) Stomach, kidneys, and portions of small intestines decomposed, and not readily distinguishable. (*q.*) Liver, dark purple, soft, and read-

ily torn. (*r.*) Bladder empty. (*s.*) Colon filled with light-brown fæcal matter. No meconium.

(9.) Microscopic examination of skin on the shirt showed it to contain hairs, and consist of similar epidermis to that upon the body of the infant.

(10.) No inquest, no additional evidence being found.

S. W. Abbott, Medical Examiner, Third Middlesex District.

VII. (1.) View of body at Westville Street, Dorchester.

(2.) July 22, 1877. One P. M.

(3.) Friends of the deceased.

(4.) Female. Twenty-nine. American.

(5.) Cynthia S. Phillips. Westville Street, Dorchester.

(7.) Deceased was one of a party at a picnic at Silver Lake, June 28th. She, with others, was on a small steamer whose boiler exploded, by which accident she was severely burned and scalded about the nates and posterior aspect of both thighs. She lingered in great distress twenty-five days, and died of exhaustion consequent upon her injuries. The ulcerations did not heal except at small points.

(8.) *Autopsy* discovered the extensive granulating ulceration above described, but nothing farther to account for death. The internal organs were healthy.

(10.) Inquest before Judge Churchill found evidence of culpable negligence on the part of the boat owners. Upon this finding was based a settlement of claims preferred by the husband of above deceased, and by other persons injured at the explosion.

The inquest in this case was ordered by the district attorney in accordance with Section 10 of Chapter 200, 1877.

F. W. Draper, Medical Examiner.

XVIII. (1.) Boston City Hospital.

(2.) August 10, 1877. 7.40 P. M.

(3.) Hospital clerk.

(4.) Male. Sixty. Irish.

(5.) Dennis O'Brien. 143 Ruggles Street, Boston.

(6 and 7.) In the course of an altercation with one James Hurl, the deceased, who was drunk, was thrown to the ground, and in that position was punched by Hurl with his knees. O'Brien at once gave loud groans, as if in great pain, and was unable to walk. He was carried to the hospital, where he died on the day following, showing symptoms of internal hæmorrhage.

(8.) An *autopsy* found two quarts of red fluid exudation in the abdomen and thorax together; two ribs were broken; two ribs on one side and four on the other were loosened and partly detached from their spinal articulation; the lower lobe of the right lung was engorged; the liver was lacerated superficially on its inferior surface; in the interior were two clots of blood of the size of a lemon.

(10.) An inquest by Judge Churchill found Hurl guilty of manslaughter, but the grand jury reported "no bill."

F. W. Draper, Medical Examiner.

XLIII. (1.) 45 Melrose Street, Boston.

(2.) October 27, 1877. 7.20 P. M.

(3.) Police.

(4.) Male. New-born. Unknown (if not "American").

(5.) James Williams. 45 Melrose Street, Boston.

(6 and 7.) This new-born baby was found dead by its mother's side in bed. The mother had concealed her pregnancy and her labor, and the condition of things was discovered by people in the house by accident. The child had been born three hours when found; the mother said it lived "a few minutes." She had no baby clothes ready, and had made no engagements of doctor, or nurse, or lying-in help. She claimed that her husband was dead.

(8.) *Autopsy.* No marks of violence. A portion of cord eleven inches long hung from navel; its end was ragged, as if torn off. Lungs were crepitant and buoyant, showing respiration. Foramen ovale of heart was closed. The meninges were congested.

(10.) Inquest found infanticide by neglect, and the case came before the grand jury. "No bill." F. W. DRAPER, Medical Examiner.

(1.) City of Taunton. County of Bristol. In house on Court Street, where deceased had lived.

(2.) November 1, 1877. Three A. M.

(3.) The police.

(4.) Male. Sixty-five years. Irish.

(5.) Patrick Laughna. Taunton. Court Street.

(6.) Lying upon floor of kitchen, without mark or bruise.

(7.) The fire-alarm was struck, and Laughna got up, as had been his custom in such cases, and opened the window to look for the fire. Soon his daughter heard the sash fall, and heard her father groan. She came to him, and found him hanging by the neck, the sash resting upon the back and side of his neck. She released him, but "he breathed but once or twice afterwards."

(8.) No autopsy.

(10.) No inquest. SILAS D. PRESBREY, Medical Examiner.

CLARKE ON VISIONS.[1]

THE parts of this book which will awaken the deepest interest are at the beginning and the end. This is not to detract from the force of the reasoning, the ingenuity of speculation, or the clearness of the language with which Dr. Clarke sets forth his views in the body of the work; but the book as a whole is most valuable in some of its suggestions and almost involuntary admissions.

We find no very new physiological truths set forth, but rather the teachings of modern physiology applied with Dr. Clarke's well-known precision of thought and distinctness of language to a subject just so far in the border land of physiology that many are inclined, in discussing it, either to relax a

[1] *Visions: A Study of False Sight* (*Pseudopia*). By EDWARD H. CLARKE, M. D. With an Introduction and Memorial Sketch by OLIVER WENDELL HOLMES, M. D.

little the strictness of scientific reasoning, or to dismiss it more or less contemptuously as unworthy their serious consideration.

The aim of the book may be stated in brief to be the explanation of visions, that is, of hallucinations of sight, as the reawakening of old impressions either in their completedness or in part, or the combination of parts into a new whole, by stimuli acting not on the peripheral nerves usually concerned in sight, but at some higher part of the nervous centres. These impressions, reawakened with unusual intensity, are referred by a well-known law of nervous conduction to their usual source, that is, the retina stimulated by visual objects, and according to the mental condition of the patient become either hallucinations, recognized after a time as such, or the delusions of insanity, accepted as realities, and forming the basis of insane acts.

In the introduction, by Dr. O. W. Holmes, we learn how this book was written in the less painful intervals of an agonizing disease, which at last brought the long-wished-for release, — facts which we can hardly help having constantly before us as we read the concluding portions upon the visions of the dying.

Just as calmly as if he had not known how nearly his own departure was at hand, Dr. Clarke reduces to automatism the visions which often give so much comfort to those watching the process of dissolution, and seem to destroy the sting of death for the dying.

No one who reads this essay, or who knew Dr. Clarke, could accuse him of sentimentalism or of any reluctance to look facts squarely in the face; and we think there cannot fail to be many, perhaps more especially among those to whom he was for years a trusted friend and adviser, who will find no small consolation in noting how, with a striking absence of that scientific intolerance which in many writers almost assumes the bitterness of theological bigotry, and which treats as the merest superstition any hint that we have not as yet sounded the depths of the mystery of existence, the author does not hesitate to admit that perhaps some of these visions may have a cause outside of the body, and may really mean, what so many think and so many others try to think they mean, that the "ego" or soul, which he does not fear to consider as distinct from the brain, has for an instant, before the body has entirely passed from its control as an instrument of expression, caught a glimpse of a world beyond, and is enabled to bear witness, in the transfigured countenance or expressions of wonder or delight, to the glories it has seen.

To those who, in questions arising in that debatable ground where speculation may assume what it pleases, and where mere reasoning can prove anything or nothing, value the feelings and opinions of a learned, thoughtful, and candid man this book will be welcome.

KARL ROKITANSKY.

The telegraph brought us the news last week of the death of this distinguished pathologist, at the ripe age of seventy-four years.

He was born February 19, 1804, at Königsgrätz, in Bohemia. His father was *Kreiscommissär* in Leitmeritz. Rokitansky went to the lower school and to the gymnasium in his native town, then to the gymnasium in Leit-

meritz, and finished his preliminary and scientific educations at the Prague and Vienna high schools. He arrived in Vienna in 1824, and took his doctor's degree there in 1828.

The pathological "*Prosectur*" or professorship in the General Hospital at Vienna was founded in June, 1812. Biermayer occupied the chair when Rokitansky began his studies, and Wagner was his assistant, succeeding him in 1830. Rokitansky's attention was early engrossed by this branch of his studies, and his own strong, clear, and honest mind was probably drawn thereto by the work and teaching of Wagner, which, though deficient in many respects, when judged by the standard of to-day, was superior to any work in morbid anatomy in Germany up to that time, and less open than teaching in other departments to the reproach of too little industrious, unprejudiced observation of facts, and too much vain theorizing in a hypocritical and pedantic jargon.

In 1827, before taking his degree, Rokitansky became second assistant, and in 1830, when Wagner succeeded Biermayer, he was made first assistant, and we soon after find honorable mention made of his work in his chief's reports. Upon Wagner's early death, in 1834, Rokitansky was appointed professor extraordinary, and in 1844 full professor and state's examiner in medico-legal cases. This was the culmination of his strictly professional honors, his advancement having been both steady and rapid. But his services and distinctions were not confined to pathology or medicine. In 1849 he was made a member of the Imperial Academy of Sciences, in 1853 rector of the University of Vienna, and in 1869 president of the Academy of Sciences. In 1867 he was made a life member of the Austrian Herrenhaus, and became an active and useful collaborator in the development of a liberal constitution, reminding us in this respect of another celebrated pathologist in Northern Germany. He received many decorations, and in 1874 was presented with the freedom of the city of Vienna In estimating the character of Rokitansky as a man and as a pathologist, we should in justice compare him and his work, not so much with his later contemporaries and the state of the science in our own day, as with the surroundings and the state of knowledge from which he emerged. We shall probably have to ask the same indulgence from our successors. Free investigation was by no means encouraged in Austria when he began his work. Paris was then the great medical centre, and it was about this time that Louis was carrying on his really scientific investigations as to the pathology of fevers, and elaborating that of typhoid. There were about one thousand autopsies annually when he was assistant pathologist at the hospital in Vienna. This material was first used with any care or method by Wagner. Rokitansky soon saw the value of describing diseases as found in the organs after death, and not as indicated by symptoms during life and by theories derived therefrom. He valued a large material as throwing light upon the origin, progress, and effects of common diseases, and simplifying their classification, and not merely as offering rare specimens and curiosities.

This was the great advance made by him, and it should not diminish the honor due him that improved instruments and newer methods have carried the science beyond the point to which he brought it. Other branches of medical science have reaped much profit from his work, and after being acted upon

favorably themselves have reacted favorably upon pathology. It is not too much to say that the progress of medicine toward the position of an exact science, which has made specialties possible, and indeed inevitable, may be ascribed rather to the development of pathology in the direction given to it by Rokitansky than to any other one thing. We think we may safely repeat his own feeling in regard to his own work as expressed when returning thanks for the honors paid him upon his seventieth birthday: "Pathological histology and pathological chemistry have been built up; experimental pathology has been called into being. My science has not only brought healing to the sick bed, but also — and upon this I lay great stress — coöperated directly and indirectly upon all fields of natural science, and thereby enriched natural science in general. By the study of pathology not only is light thrown upon a limited and hitherto obscure region, but it is also shown what results are to be reached by material investigation in every direction. I confess I rejoice and take pride in this, that every advance in my department is followed by advances in others."

Rokitansky was not a good teacher, and a very poor lecturer, as we painfully remember. His voice was inaudible, his manner negligent, and his German impure even for Vienna. Neither was he a voluminous writer. We believe his neglect to cultivate the accomplishments and attractions necessary in the successful teacher may be attributed, in part at least, to his dislike of the pompous pedantry prevalent in his earlier days. His reputation has suffered, and will continue to, in consequence. It will be mainly supported by his chief work, a Manual of Pathological Anatomy, which was published in Vienna in five volumes, 1842–1846, and has since passed through several editions, and been translated into English by the Sydenham Society. He failed to found a school, nor is his teaching propagated to-day at other universities and in other parts of the world by his pupils. In this respect he exhibits a marked contrast to his famous Berlin contemporary, Virchow. But he was an honest, laborious man, and what his hand found to do, either to advance science or to promote the best interests of mankind, that he did with his might. The pathological institute, which he was instrumental in procuring for the hospital in Vienna, will be a monument to his memory, and, in contrast with the miserable, leaky structure in which he began his work, its improved facilities and accommodations will fitly represent the progress made in the science to which he devoted his life and so largely contributed.

Upon his retirement from the professorship, rendered obligatory by his reaching the threescore and ten years, the post was offered to Recklinghausen and declined by him. It is now filled by Heschl, of Graz, a pupil and ardent admirer of Rokitansky's, whose name we have been sorry to see lately connected with an apparently reckless and unfounded assault upon the products of American pork packing.

MEDICAL NOTES.

— A novel addition is about to be made to the library of the Paris Academy of Medicine by the creation of a special department for the display of surgical instruments. The son of one of the most eminent accoucheurs of the last century has decided to give the important collection of instruments made by his father.

— Dr. Andrew Fergus, in the June number of the Edinburgh *Medical Monthly*, shows by a series of interesting experiments how easily sewer gases permeate and pass through the water in the traps which heretofore, very strangely, have been considered an effectual prevention of the entrance of sewer gas into houses through the waste-pipes.

— The late Dr. Jephson, of Leamington, Eng., actually received during one year of his practice £24,000. — The *Lancet* congratulates Brown-Séquard on his recent appointment as the successor of Claude Bernard in the College of France, and thinks the profession at large will be gratified by the appointment. — Professor von Bischoff has been replaced in the University of Munich by Professor Rüdiger. — Dr. Erasmus Wilson has resigned his position as professor of dermatology in the College of Surgeons, London. It is thought that Jonathan Hutchinson will be his successor. — Out of accumulated funds the Society of Medical Professors in Vienna propose to erect a bust of the late Professor Oppolzer. — The Prince of Wales has appointed Professor Lister as juror in the department of medicine, hygiene, and public relief in the British section of the Paris Exhibition.

— Chinese rice paper, is not really a paper but consists of the pith of the stems of *Aralia papyrifera*, cut with large and very sharp knives, either radially into small, or spirally into large, layers as thin as paper, which are pressed smooth, and are used in China for delicate aquarell paintings, and in Europe in the manufacture of artificial flowers, etc.

— According to the Lyon *Medical* the women of Roumania, during their confinements, place themselves in the knee-elbow position. The midwife, meanwhile, with the fore-arms strongly compresses the abdomen of the patient in order to prevent the uterus and its contents from rising during the intervals between its contractions. The placenta is always buried.

— After a series of experiments which he has communicated to the Paris Academy of Sciences, Professor Vulpian concludes that the chorda tympani nerve is derived from the trigeminus, and not from the facial nerve or from Wrisberg's branch.

— It is reported that a university is to be established at Tomsk, Siberia, funds in sufficiency having been subscribed by private individuals.

— Judge Clark, of Texas, has given the opinion that a physician cannot be compelled to neglect his business to attend court and testify as an expert without compensation, and added that he knew of no law which can force a doctor into court against his will.

— The *Medical Record*, June 29th, severely condemns the American Medical Association for hindering the publication in medical journals of papers read at its meetings.

— It seems that Charcot was not a defeated competitor for the chair now occupied by Brown-Séquard in the College of France; he withdrew from the contest. — Dr. A. Menzel, one of Billroth's most distinguished pupils, recently died in Berlin. — At the recent exhibition of the London Royal Art Academy, Sir Henry Thompson contributed a painting of a chapel of St. Mark's, Venice, and Dr. Evershed a horse's head as A Study from Life. — Professor Hoffmann, of Leipzig, and Drs. Walffhügl and Forster, of Munich, are candidates for the chair of hygiene in the University of Amsterdam. — Professor Bartels, of Kiel, is dead. — Privat Docenten Fleischl and Von Stoffela, of Vienna, have been appointed extraordinary professors respectively of physiology and clinical medicine. — Nobeling, the would-be assassin of Emperor William, is not a member of our profession, but a doctor of philosophy. — Dr. B. W. Richardson has been elected an honorary Fellow of the Faculty of Physicians and Surgeons of Glasgow. — Professor Huxley has been elected corresponding Fellow of the Royal Academy of Rome in the department of natural history. — Sir James Coxe, a distinguished Scotch physician, is dead. — Dr. William Goodell has in press a work entitled Lessons in Clinical Gynæcology. It will receive warm welcome. — During the year 1877 six hundred and twelve deaths from typhoid fever occurred in Berlin. — There are forty thousand epileptics in France: four thousand of them in insane asylums, the remainder at liberty. — Sir Henry Thompson does not think the application of the microphone to surgery, especially in searching for stone, will prove practicable.

— *Brain* is the title of a new journal of neurology which we have received, edited by Drs. J. C. Bucknill, J. Crichton Browne, D. Ferrier, J. Hughlings Jackson, — men whose names are well known, and whose ability is respected all over this country as well as Europe. They will doubtless be able to command the very best of support, and indeed the papers in the number lying before us are full of interest.

In spite of the huge volume of our current literature we are always happy, when a new and good journal appears, to revise our list once more and give it a welcome. The name strikes the ear at first with rather a shock, but we presume it was adopted as the antithesis of "mind," the editors of *Brain* being well known to be interested in the class of subjects treated of in that journal, but wishing to approach them from the physiological point of view. As a matter of fact the new journal proposes to concern itself with "all that relates to the anatomy, physiology, pathology, and therapeutics of the nervous system," so that its title is something of a misnomer.

— Von Vintschgau and Hönigschmid, — Pflüger's Archiv, — in order to learn whether the glosso-pharyngeal nerve actually ends in the taste bulbs of the posterior third of the tongue, excised a short section of the nerve in young rabbits. Five months later the "taste-goblets" of the side on which the nerve was divided had completely disappeared, and in place of them was found ordinary squamous epithelium.

— The *Lancet* considers a knowledge of stenography very necessary to the medical student. This journal blames Sir Henry Thompson for allowing his views on the uses of the microphone in surgery to be published in the London *Times*.

BOSTON CITY HOSPITAL.

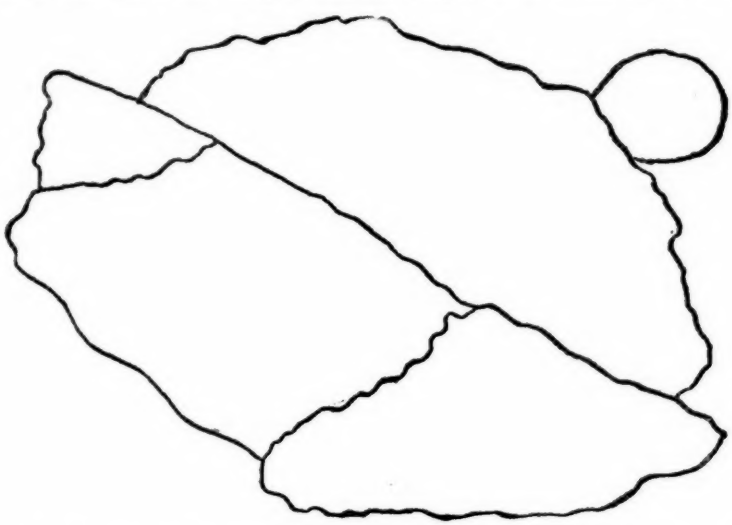
SURGICAL CASES IN THE SERVICE OF DR. INGALLS: THREE CASES OF FRACTURE OF THE SKULL.

[REPORTED BY E. O. OTIS, HOUSE SURGEON.]

CASE I. *Compound, Comminuted, and Depressed Fracture; Trephining.*— March 31, 1878, Hugh Reed, twenty-two years old, was brought to the hospital by a police officer, and left without a history. It was learned a few days after, from the daily papers, that he had been struck on the head with a shovel. He walked up the steps of the hospital and undressed himself unaided. When seen he was conscious, did what he was told to, but did not speak. All his movements were slow.

There was no paralysis; the respiration was loud; the pulse 80 and strong. The left pupil was normal; the right was larger than the left, and did not respond to light. Both eyes were ecchymosed and eyelids swollen. His tongue was black and dry. His general condition, filthy.

Besides several cuts and abrasions about his face, there was an incised wound an inch and a half long on the left temple, three inches above the eye.



Through this the probe passed into a crack as between two bones. In the centre of the left temple there was a depression of irregular outline about two inches in diameter, with a hard border, the seat of fracture. There were also signs of epistaxis. About two hours after his entrance ether was given, and a crucial incision was made by Dr. Thorndike, each arm of which was from three to four inches long. A fracture nearly three inches long by two and a half inches wide was exposed, of a gutter shape; the centre being depressed perhaps three quarters of an inch. Both the frontal and parietal bones were involved. The fragments were above completely separated, and below held only by the inner table and tissues on the bone.

Attempts to lift the fragments being unsuccessful, a small circle of bone was removed with the trephine near the upper edge of depression, and the upper and largest piece separated with the elevator; the remaining fragments were then easily taken away.

The exact size of the fragments, in their relative position, is shown in the diagram.

In the course of the operation a severe hæmorrhage from the inside of the skull started, and a large artery, probably the middle meningeal, was tied, the dura mater being held by a tenaculum. The membrane itself was apparently uninjured, but forced down from its normal position. Several small arteries in the flaps being tied, the latter were brought together by sutures, an opening being left for drainage, and the patient was put to bed with an ice-cap upon his head.

During the operation the pulse ran up to 160, and became weak. Stimulants and sedatives were given. After passing a restless night he awoke quite bright the next morning, said he felt well, and talked intelligently; the hæmorrhage had entirely ceased, and the pulse was fairly strong. On the next day, the beginning of the service of Dr. Ingalls, he complained of pain at the site of the wound, which, later, extended over the whole head, with œdema and swelling about the wound, running over to the other side of the forehead. The pulse was 100, temperature 100° F., and for the next ten days the temperature oscillated from 100° to 101.5° F.

On the fourth day the sutures were removed, the flaps having nearly united by first intention; there was a small amount of bloody discharge. Two days after this the patient got up and walked the whole length of the ward, and back again. During this time and afterwards the patient complained of pain in his head, of varying intensity, and occasionally was delirious at night. The discharge becoming purulent and quite abundant, the wound was syringed out with a weak solution of carbolic acid and water; this treatment was continued thenceforward daily, much to the relief and comfort of the patient. Pulsation of the brain was evident through the flaps.

The wound continued to heal kindly, with more or less suppuration, the flaps becoming depressed and glued down to the membranes, making a great cavity, and destroying whatever symmetry he had to his head. A few bits of necrosed bone came away from time to time. His headache was less frequent, and on the 10th of May, forty days after the accident, the note was made that "he sat up most of the time, and went out-of-doors on sunny days. Reading for a little while, the left eye became watery and troubled him; he also said his memory had become poor." He was discharged on the 20th of May, physically well. We cannot say how his present mental condition compares with his former.

Case II. *Compound Fracture of the Skull and Probable Fracture of the Base; Recovery.* — W. C., a school-girl, twelve years of age, was caught by her clothing by the belt of a planing-mill, running with great velocity and through a small square hole. In a short time after the accident she was brought to the hospital, and appeared to be in a state of profound shock; was unconscious, with pulse at 60, and weak. Her eyes were turned to the right, and pupils insensible to light; there was no paralysis. Rather profuse hæm-

orrhage from the ears, and from the mouth; there was also vomiting of bloody matter. Pressure over the right mastoid process caused great pain, and, to a lesser degree, the same over the left. There was a slight cut through the scalp over the left temporal region, nearly concealed by the hair, through which the probe detected a depressed fracture of the outer table, the space of which was small in extent. An hour after her entrance clonic convulsions of a few minutes' duration supervened, and there was screaming at intervals. Remedies suitable to this condition were administered; the prognosis was unfavorable.

After an hour or two the patient rallied, and recognized her friends. There was again vomiting of blood; the hæmorrhage from the ears continued for the greater part of the night, but ceased by the following morning.

The next day there was much improvement; the patient was conscious, and answered questions intelligently; she also swallowed a little brandy and milk. She complained of pain at the seat of fracture, and the left eyelid was swollen; the eye was closed. Her pulse was 60, and temperature 98.2° F. She slept much during the day.

On the next day the following note was made: "Slept well last night. Both eyes closed; no more hæmorrhage; takes nourishment well; is somewhat deaf, and answers questions slowly though intelligently; sleeps most of the time; complains but little of her head, to which an ice-bag has been constantly applied since entrance. Pulse 60, and stronger; temperature 98.6° F."

The day after this, April 5th, she complained of severe earache, and she was reported to have been somewhat delirious in the night. The temperature was still normal. There was swelling below and behind the right ear, accompanied with tenderness; there was also tenderness below the left ear.

April 6th; the swelling below the right ear had increased in extent, and the deafness was more marked. She was restless and singing during the previous night. Vacant expression. The bromide of potash, which had been given for a number of days previous, was increased.

On the next day the swelling above mentioned was slightly diminished. When asked to localize the pain which she complained of she put the tip of her finger over each mastoid process. The pupils were equal.

Seven days after the accident, the temperature was a little raised for the first time, 100° F.; it fell to normal, however, on the next day, and remained so. Facial paralysis was also noticed for the first time, the mouth being drawn a little to the right. This paralysis soon became more marked, the deflection of the mouth to the right being especially noticeable when she spoke. There was also an overflow of tears from the left eye, which she was unable to close.

April 9th the following note was made: "Looks brighter; pulse stronger, 90; complains of light through the curtains, which have been kept down."

From this time until her discharge she gained rapidly. Her appetite improved. The paralysis and deafness diminished, and she became brighter and more intelligent every day. On the 20th of April, nineteen days after the accident, she sat up for the first time. It was now noticed that in the meatus of the right ear, in which was the deafness, there was a fungoid growth of strawberry-like appearance.

May 2d, thirty-one days after the accident, she was discharged, nearly well. Her condition then was as follows: Hearing apparently perfect. Paralysis not noticeable except while speaking, when there was a slight deflection to the right. General health good. Still complained of occasional headache and earache. She could not read very long at a time. She has been seen several times since she left the hospital, and seemed to be perfectly well, just a slight paralysis at the corner of her mouth being apparent when she spoke.

Case III. *Penetrating Gun-Shot Wound of the Head.* — E. M., a young man, twenty-nine years old, was brought to the hospital on the afternoon of the 12th of April with a small pistol wound in the right temporal region, self-inflicted, he having previously swallowed thirty drops of laudanum without effect. The act was done in the forenoon.

After some delay Dr. H. G. Clark, who was called, administered ether, made a crucial incision at the seat of the wound, and removed about two thirds of the bullet, all that could be found. The flaps being turned back, a small hole was seen, through which brain matter was oozing, and the pulsations of the brain were visible. When the patient was first seen at the hospital, in the afternoon, he was in a state of semi-shock, conscious but reticent. It was said, however, that in a little while after the operation he was quite relieved, and sensible for a time. The wound was left entirely open, a light, cold compress placed over it, and the patient put to bed. Subsequently an ice-cap was applied; the room was darkened, and bromide of potash given him.

On the next day the patient was quiet, though evidently conscious, for when asked if he wanted this or that he answered with a nod. There was considerable oozing from the wound. On the second day, however, he was delirious and in constant motion; carphologia, and a tendency to stertorous breathing, with a puffing out of the left cheek on expiration. The pulse was 64 and irregular; the pupils equal and contracted. As he took hardly anything by the mouth nutrient enemata were given.

From this time until his death, which occurred on the fourth day after entrance, all these bad symptoms were aggravated; there were also involuntary micturition and defæcation. The temperature reached 106° F.; respiration increased to 60, and became stertorous; the pulse irregular, feeble, and rapid, 160; convulsions more and more frequent, with frothing at the mouth.

Medical Examiner Draper made the autopsy eleven hours after death.

The temporal fascia and muscles were largely dissected up. The skull was very thin and soft, especially at the point of puncture. The bullet hole was ragged, and from a quarter to a half inch in diameter, beveled largely at the expense of the inner table. There was brain substance and a moderate sized clot outside of the dura mater, near the bullet hole. The brain under the dura mater, particularly on the opposite side from the entrance of the bullet, was thickly covered with pus and blood. What was apparently a bruise of the brain, about an inch square, existed at a point nearly opposite the point of entrance of the bullet, and a probe passed in here came out at the entrance hole, showing that the ball had traversed both hemispheres. By careful slicing the brain substance the track was exposed, showing a slightly upward direction of the bullet. The path was a perfect pulp. Splinters of bone were found in this track, some of them marked with lead. The remaining portion

of the bullet was found an inch behind the track imbedded in brain substance. It had apparently rebounded from the interior of the skull, though no mark of impact was to be seen.

SHORT COMMUNICATIONS.

A CASE OF CYSTIC CANCER OF THE OVARY.

BY M. L. BROWN, M. D., NATICK, MASS.

Mrs. A., twenty-two years old, thin and spare, was married in August, 1877, and found herself in the following October in delicate health, with slight dyspeptic symptoms and difficulty in passing water; the bowels were constipated, as had always been her habit; menstruation was regular; the complexion was sallow and unhealthy. She was treated by a homœopath for some time, in the belief that she was pregnant, without relief.

About the middle of November she discovered an enlargement of the abdomen in the hypogastric region, which increased in size until she first came under my care on January 26, 1878. The abdomen was much enlarged, and rendered tense by a smooth, firm, rounded, immovable tumor rising from the pelvis. It was as large as the uterus at the fifth month. The catamenia were scant and irregular; the bowels moved daily.

In the following twenty days the growth increased very rapidly, and laterally there appeared irregular prominent semi-globular growths projecting from the central tumor. This rapid change led me to summon Dr. James R. Chadwick, of Boston, in consultation, who confirmed my diagnosis of ovarian disease. In view of the patient's poor general condition and the comparative smallness in the size of the tumor, he recommended the continuance of the tonic treatment and the postponement of operative measures. The patient improved somewhat in condition, although the tumor continued to grow until March 5th, when Dr. Chadwick, having detected a wave of fluctuation, inserted an aspirator to give temporary relief by the withdrawal of the fluid contents and to establish the diagnosis. Blood only escaped from the trocar, the end of which was felt to be immovable in the mass, thus indicating that it was of semi-solid consistency. Immediately suspecting cancer, we sent a small plug of tissue extracted from the trocar to Dr. Fitz for microscopic examination, but with negative results.

In less than two months the feet and legs became œdematous, the appetite capricious, emaciation extreme, and the breathing difficult. On May 18th we detected ascitic fluid, two quarts of which Dr. Chadwick removed with the trocar, at the same time expressing his conviction of the malignancy of the growth, and declining to extirpate the mass at the request of the family.

The patient failed rapidly, and died sixteen days later. Treatment consisted of Squibb's liq. opii comp., stimulants, and regulating diet, so as best to maintain her failing strength.

The history of this case from first to last corresponds with that given in Thomas's Diseases of Women for cystic cancer of the ovary, a rare form of cancer; so rare that in one thousand eight hundred and twenty-three cases of ovarian disease collected by Scanzoni but two were of cystic cancer. Treatment, either surgical or medical, tending towards cure avails nothing in these cases. They terminate fatally in less than a year. The duration of this case was about eight months.

Upon section of the body post mortem it presented the following appearance after removing about two quarts of ascitic fluid: An irregular globular encysted mass, nine inches in diameter, filled the abdomen and pelvis, pressing all the abdominal organs well up upon the diaphragm. The omentum was much congested, and that, together with the large and small intestines, the walls of the abdomen and pelvis, was thickly studded with diseased growths from the size of a buckshot to that of an English walnut. The liver was enlarged, and contained many masses of the same growth in its substance. On removing the encysted mass it was found to have grown from the right ovary; it nearly filled a common water-pail, and weighed twenty-five pounds.

Dr. R. H. Fitz microscopically examined a portion of one of the growths, and found it to be unmistakably cancerous, consisting of "innumerable small alveoli, in which were rather large round cells, many in a state of fatty degeneration, others having undergone mucous metamorphosis. There was hæmorrhage into the substance of the nodule."

LETTER FROM BALTIMORE.

MR. EDITOR, — Two subjects are always at hand when all others fail, namely, the national crisis and the weather. The former it is not easy to distort into a medical theme, but the great dearth of news in Baltimore suitable for your JOURNAL might tempt your correspondent to make use of the latter and enlarge upon the "heated term," more especially, of course, as regards its *rôle* in the ætiology of cholera infantum and insolation, were it not that in spite of the high registry of the thermometer the prevalence of these diseases has been upon the whole quite small as compared with previous years, and that the intense heat left us yesterday evening to give place to-day to much cooler weather.

The dog scare seems to occupy a large share of public attention just at present, and many are suffering from a very mild form of — shall it be styled "lyssaphobia"? or perhaps the mongrel expression "caniphobia" would fit better. However, the good people in question have taken it upon themselves to throw poisoned meats to the dogs, which is against the recent act of our Maryland legislature, and the president of the Society for the Prevention of Cruelty to Animals, Mr. Charles P. Montague, caused the presentment by the grand jury of certain parties guilty of the offense named; but when they were presented by that august body to the court, Judge Brown decided that he had no jurisdiction in the case, it being matter for a magistrate. No cases of real hydrophobia are reported as yet, although several persons have been bitten, among others the boy Willie Howe, who, having been seized with spasms at Reid's Hotel a few evenings since, was supposed to be suffering from hydrophobia, and consequently was removed to the City Hospital and given chloroform with the happiest result. After a calm sleep he was greatly improved. The convulsions, it was ascertained, had nothing to do with the dreaded disease, but were caused by calculi.

Our quarantine is remarkably empty. An American schooner from Matanzas — the Kate Rommell — was detained there a few days ago, as it was reported to the health department that when she left Matanzas she had a case of contagious disease on board which resulted fatally and delayed her sailing. The physician at the quarantine station reported yesterday that there was no sickness on board her at that time, but she will remain at quarantine until thoroughly disinfected. This time two years ago, when yellow fever was rife in our city, it was otherwise.

That never-failing nuisance, the basin, is taking advantage of the summer season and making itself as disagreeable as possible. Dr. James A. Stewart, health commissioner, made an inspection of it yesterday afternoon for the purpose of ascertaining how far contributions from sewers add at the present time to the causes of the bad odor arising from that source. He is of opinion that the nuisance as regards sewers has been greatly abated. Dr. Stewart will confer with the mayor regarding some means of affording temporary relief. The sugar refineries are now nearly all in operation. Last year only one of the refineries was worked, and the improvement in the condition of the basin was the subject of general remark. Some two years ago active measures were taken to prevent the flow of refuse matter from these refineries into the harbor, as it was discovered that this was the main cause of all the trouble. The evil will never be rooted out until an intercepting sewer is constructed with a view of preventing stagnation. The effect of the stench and filth upon the public health, it is strange to say, is *nil;* in fact, those parts are at *present* remarkably free from disease, but when the yellow fever made its appearance in 1876 the epidemic was confined to a portion of the city near the basin.

The vaccine physician for the ninth and tenth wards, Dr. J. H. Scarff, is engaged in making a critical analysis of the pump-water in his locality. The water from this pump is very much used for culinary and other purposes, and it is feared that it has become contaminated from the many sinks about.

Before closing, and apropos of water, it may be interesting to mention the Deep Rock spring water recently introduced to Baltimore. It is a water obtained from an artesian well at or near Oswego, N. Y. In order to secure it a bank of hard pan, thirty feet in height, had to be removed, and a bed of solid rock penetrated to the depth of over one hundred feet. The water was first obtained at great expense in 1870, and placed upon the market in 1871. As a beverage it has already found favor with the public, and is rapidly taking the place of Vichy, Kissingen, and Seltzer. It is slightly effervescent, and in taste is equal to the Apollinaris spring, being preferred to it by many, and possessing the

advantage of a much more reasonable price. The water can be had in any quantity, and is shipped in barrels from the spring. As an adjuvant in the treatment of disease it is recommended by our first physicians. It is suitable in cases of renal and vesical affection, especially in those with slight irritation by which patients are obliged to urinate several times at night. Thus prescribed it will be found in a few days to check the desire, and subsequently to stop it altogether at night-time.

It is used in dyspepsia, in which disease it gives tone to the mucous membrane of the stomach and relieves the slight asthma dyspepticum often attendant. Deep Rock water should be drunk by those affected with acne. Its action is that of a diuretic, mild aperient, and alterative, slightly tonic, and may be taken in doses of two, three, four, or five glasses *per diem*, according to the nature of the case. The principal ingredients are, according to the analysis of Professor Douglas, of the University of Michigan: —

	Per Gallon.
Chloride of sodium	308.183 grs.
Chloride of potassium	149.084 grs.
Chloride of magnesium	10.244 grs.
Carbonate of lime	18.191 grs.
Silica	71.698 grs.
With traces of sulphuric acid, protoxide of iron, and free carbonic acid.	
Total of solids per gallon	559.181 grs.
Temperature, 50° F.	

BALTIMORE, *July* 12, 1878.

COMPARATIVE MORTALITY-RATES.

	Estimated Population, July 1, 1878.	Deaths during week ending July 20, 1878.	Annual Death-Rates per 1000 living.		
			For the Week.	For the Year 1877.	Mean for ten Years, '68-77
New York.	1,093,171	716	34.06	23.42	28.71
Philadelphia.	876,118	358	21.25	18.80	21.54
Brooklyn.	549,438			21.51	25.50
Chicago.	460,000	405	45.78	17.83	22.39
Boston.	375,476	202	27.97	20.10	24.34
Providence.	100,000	49	25.48	18.81	19.20
Lowell.	55,798	35	32.62	19.09	22.50
Worcester.	54,937	21	19.89	14.07	22.30
Cambridge.	53,547			18.69	20.83
Fall River.	53,207	34	33.23	21.35	24.96
Lynn.	35,528	9	13.18	20.42	19.67
Springfield.	33,981	10	15.31	16.02	19.77
Salem.	27,140	13	24.90	20.38	21.15

BOOKS AND PAMPHLETS RECEIVED. — The Obstetric Forceps: When and How to Use It. By George J. Engelmann, M. D. 1878.

Remarks on Ovariotomy, with an Appendix containing the History of Several Typical Cases. By J. W. Rosebrugh, M. D. Montreal. 1877. (Reprint from the Canada Lancet.)

A Hystero-Psychosis. Epilepsy dependent upon Erosions of the Cervix Uteri. By George J. Engelmann, M. D. St. Louis. 1878. (Reprint from the St. Louis Clinical Record.)

The Hystero-Neuroses, with Especial Reference to the Menstrual Hystero-Neuroses of the Stomach. By George J. Engelmann, M. D. St. Louis, Mo. (Reprint from Volume II., Gynæcological Transactions, 1878.)

The Soft Palate. Its Value in Diagnosis as compared with the Tongue in Derangements of the Liver, etc. By William Abram Love, M. D. (Reprint from the Transactions of the Medical Association of Georgia. 1878.)